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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,036	11/06/2003	Mladen Marko Kekez	MAC 494-2	7405

7590 01/31/2007
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EXAMINER

KAPLAN, HAL IRA

ART UNIT	PAPER NUMBER
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2836

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/31/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/702,036	Applicant(s) KEKEZ ET AL.	
	Examiner Hal I. Kaplan	Art Unit 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 16 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Canada on October 28, 2003. It is noted, however, that applicant has not filed a certified copy of the Canadian application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the US patent of Gale (4,165,482) in view of the US patent of Boby (4,542,358) and the US patent of Kassabgi (3,631,266).

As to claim 1, Gale, drawn to cable fault location, discloses a pulse generating device comprising: a main delay line (10) and a low impedance electrically driven impulse generator (14-26) (see column 4, lines 18-20 and column 5, lines 13-20), the main delay line (1) being connected to the electrically driven impulse generator at one end. Gale does not disclose (1) a quarter-wave trap or (2) the main delay line being short-circuited at an opposite end.

Boby, drawn to a device protecting a coaxial cable against high-powered, low-frequency spurious pulses, discloses a quarter-wave trap between a pulse generator and a main delay line (see column 1, lines 51-53 and column 2, lines 46-52). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to connect a quarter-wave trap between the impulse generator and main delay line of Gale, in order to protect the main delay line against unwanted high-powered, low-frequency pulses. Boby does not disclose the main delay line being short-circuited at an opposite end.

Kassabgi, drawn to a delay line pulse generator, discloses transmission of a pulse via a short-circuited delay line (DL) (see column 2, lines 11-19). It would have

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been obvious to one of ordinary skill in the art, at the time of the invention, to short-circuit the delay line of Gale in view of Bobby, in order to allow for testing of the device.

Neither of the references disclose the pulses as being RF pulses; however, selection of operational levels (e.g. frequency within the RF band) for an electronic device is an engineering decision based upon the system's intended use and the expected requirements of the systems with which it will interface. See MPEP §2144.04 IV(A). In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

As to claim 5, Gale discloses an impulse generator comprising a capacitor (16) connected in series with an internal delay line (18) and a switch (17) (see column 4, lines 30-33).

6. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gale in view of Bobby, and further in view of the US patent of Luu (6,225,864).

As to claim 2, Gale in view of Bobby disclose all of the claimed features, as set forth above, except for an antenna. Luu, drawn to an RF amplifier having a dual slope phase modulator, discloses an antenna (22), the antenna being connected as the load of a pulse generator circuit (see column 3, lines 23-26). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to connect an antenna as the

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load of the circuit at the opposite end of the delay line of Gale in view of Bobby, in order to transmit RF signals with minimal or no phase error.

As to claim 9, Gale discloses an impulse generator comprising a capacitor (16) connected in series with an internal delay line (18) and a switch (17) (see column 4, lines 30-33).

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gale in view of Bobby and Kassabgi, and further in view of the US patent of Ross (3,402,370).

As to claim 3, Gale in view of Bobby and Kassabgi disclose all of the claimed features, as set forth above, except for the main delay line being comprised of two or more smaller delay lines connected in series. Ross, drawn to a pulse generator, discloses a pulse generator (1,2) connected to a main delay line comprised of two smaller delay lines (3,4) connected in series. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use two smaller delay lines in series as the main delay line, in order to make it easier to repair the main delay line in the event of a fault.

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gale in view of Bobby and Kassabgi, and further in view of the US patent of Tsuru et al. (6,864,760).

As to claim 4, Gale in view of Bobby and Kassabgi disclose all of the claimed features, as set forth above, except for a capacitor connected parallel to the main delay line or one of the smaller delay lines. Tsuru, drawn to a delay line with a parallel capacitance for adjusting the delay time, discloses a capacitor (14) connected parallel to

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a delay line (12) (see column 1, lines 63-67 and column 3, lines 6-7). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to connect a capacitor in parallel with the main delay line of Gale in view of Bobby and Kassabgi, in order to allow the delay time to be continuously adjusted as needed.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gale in view of Bobby and Luu, and further in view of Ross. Gale in view of Bobby, Luu, and Ross disclose all of the claimed features, as set forth above.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gale in view of Bobby and Luu, and further in view of Tsuru. Gale in view of Bobby, Luu, and Tsuru disclose all of the claimed features, as set forth above.

Response to Arguments

11. Applicant's arguments, see Remarks, filed November 16, 2006, with respect to the objections have been fully considered and are persuasive. The objections have been withdrawn.

12. As to claims 1 and 5, as to Applicant's argument that the conductor under test in Gale's device has nothing to do with the device itself and cannot be said to be a delay line as that term is used in claim 1, the terms "device" and "delay line" are general terms. A device can be an entire system, which is the case here, and the term "delay line" refers to any line which has a finite transmission delay, e.g. any non-ideal line (see page 2, line 13 or paragraph [0007], line 1 of the published application). The line of Gale has an inherent small delay and is thus a delay line. Where applicant acts as his or her own lexicographer to specifically define a term of a claim, the written description

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must clearly define the claim term and set forth the definition so as to put one reasonably skilled in the art on notice that the applicant intended to so define that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999).

As to Applicant's argument that no one would be motivated to use the quarter-wave trap of Bobby in Gale's device because doing so would defeat the whole purpose of Gale's device, one of ordinary skill would be motivated to use such a quarter-wave trap in Gale's device, because the purpose of Gale's device is to detect faults for the purpose of protecting the conductor from potential damage. Bobby's wave trap is consistent with this purpose and would provide further protection by preventing some faults from even occurring.

13. In response to applicant's argument that the examiner has combined an excessive number of references, reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention. See *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991). In addition, all of the references relate to delay lines, RF signals, and/or signal transmission.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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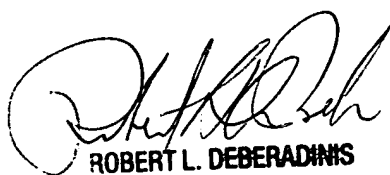
mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal I. Kaplan whose telephone number is 571-272-8587. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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ROBERT L. DEBERADINS
PRIMARY EXAMINER